REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested. Claims 1 and 17 have been amended, and Claims 33-36 have been added. No claims have been canceled. Claims 1-36 are currently pending in the application.

Claim Rejections – 35 U.S.C. § 102(b)

In the Office Action, the Examiner rejected Claims 1-2, 4, 7-8, 10, 12-18, 20, 23-24, 26, and 28-32 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,842,002 issued to Schnurer et al. ("*Schnurer*"). Claims 1 and 17 have been amended to more particularly identify and distinctly claim subject matter to which the Applicant wishes to receive patent protection. The Applicant reserves the right to pursue the subject matter featured in original Claims 1 and 17 in the present application or a continuation application.

Independent Claim 1

With regard to independent Claim 1, there is recited:

> A computer-implemented method for generating a transformation document, comprising:
>
> establishing a limited environment within a general environment, wherein said limited environment comprises at least one mock resource, wherein said general environment comprises at least one real resource, and wherein said limited environment and said general environment are both implemented using the same type of operating system;
>
> executing at least a portion of an untrusted program within said limited environment; and
>
> examining said limited environment after execution of at least said portion of said untrusted program to check for undesirable behavior exhibited by said untrusted program (emphasis added).

Claim 1 provides an advantageous method for executing an untrusted program. According to Claim 1, a computer-implemented method establishes a limited environment within a general environment, executes at least a portion of an untrusted program within the limited environment, and examines the limited environment after execution to check for undesirable behavior exhibited by the untrusted program. As the limited environment and the general environment are both implemented using the same type of operating system, numerous advantageous are realized, e.g., the untrusted program may be examined in an environment that implants the same type of operating system as the general environment. Also, in an embodiment, there is no need for a different operating system or a different machine to implement both the limited environment and the general environment.

Such a method is neither disclosed nor suggested by *Schnurer*. Instead, *Schnurer* discloses an approach for a computer virus trapping device that creates a virtual world that simulates the host computer system intended by the virus to infect (Abstract). The computer virus trapping device includes an emulation means that emulates a foreign operating environment (Col. 7, lines 4-18). *Schnurer* states "a foreign operating system different from the one being protected is introduced into the data stream before the data arrives at the computer system to be protected" (Col. 4, lines 17-20). The computer virus trapping device is placed in front of a node to be protected, and the computer virus trapping device passes data directly through to the host system in addition to simultaneously processing it. (Col. 6, lines 57-58; trap device 10 in FIG. 3 and FIG. 4; Col. 8, lines 50-52).

While *Schnurer* addresses the generally similar subject matter of executing a potential computer virus in an emulated environment, it should be noted that the approach of *Schnurer* differs in significant ways from the subject matter of Claim 1. As discussed above, *Schnurer* teaches a method in which a foreign operating system, different from the one being protected, is introduced into the data stream before the data arrives at the computer system to be protected (Col. 4, lines 17-20). Thus, *Schnurer* teaches that the emulated environment and the protected environment are both (a) distinct, and (b) implemented using different operating systems.

In sharp contract, the method of Claim 1 discloses an approach wherein the limited environment is within a general environment. For example, Fig. 1 of the Applicant's patent application shows a system 100 (corresponding to the general environment). The general environment includes a limited environment 110.

Rather than showing a limited environment within a general environment, *Schnurer* shows an emulated environment (generated by emulation means 48 on virus trapping device 10) that is completely separate from the general environment to be protected. For example, FIG. 3, and the corresponding description, of *Schnurer* makes clear that virus trapping device 10 is separate from the general environment. *Schnurer* states "the file server 42 is the computer system to be protected. The virus trapping device 10 is placed in the data stream that connects the filer [sic] server 42 to other workstations 38...In this scenario, all traffic to and from the file server 42 is monitored for viruses by the trap 10" (Col. 6, lines 42-50). Thus, the approach of *Schnurer* cannot possibly show "establishing a limited environment within a general environment" as featured in Claim 1.

Another distinction between *Schnurer* and the approach of Claim 1 is that Claim 1 discloses an approach wherein the limited environment and the general environment are both implemented using the same type of operating system. In contrast, *Schnurer* states "without the use of a foreign operating system the invention itself risks contamination. A foreign operating system different from the one being protected is introduced into the data stream before the data arrives at the computer system to be protected" (Col. 4, lines 16-20). *Schnurer* teaches, "the virus cannot escape the emulation box 48 because the box exists in a foreign operating environment..." (Col. 7, lines 15-16). Thus, it is clear that the approach of *Schnurer* requires the emulated environment to be implemented using a different type of operation system than the protected system to prevent viruses from escaping into the protected system.

While *Schnurer* raises the possibility that its approach "can be done without a transplatform," *Schnurer* strongly teaches away from such an approach by further stating:

> "it will be slow and absolutely unsafe. The use of a foreign operating system can be likened to the use of lead walls and glass walls and mechanical arms used by people manipulating radioactive materials in a lab. While it is certainly possible to pick up radioactivity with one's bare hands, it is not highly recommended or is it safe. While the invention can be had without the use of a foreign operating system, it is not highly recommended nor is it safe" (Col. 4, line 63 – Col. 5, line 5).

Thus, to the extent that *Schnurer* teaches an operational embodiment, a foreign operating system is required. As a result, the approach of *Schnurer* cannot possibly show "wherein said limited environment and said general environment are both implemented using the same type of operating system" as featured in Claim 1.

As argued above, *Schnurer* neither discloses nor suggests "establishing a limited environment within a general environment, wherein said limited environment comprises at least one mock resource, wherein said general environment comprises at least one real

resource, and wherein said limited environment and said general environment are both implemented using the same type of operating system," as recited in Claim 1. Therefore, Applicant submits that Claim 1 is patentable over *Schnurer*.

Claims 2-16 and New Claims 33 and 35 are dependent claims, each of which depends (directly or indirectly) on Claim 1. Each of Claims 2-16, 33, and 35 is therefore allowable for at least the reasons given above with respect to Claim 1. In addition, each of Claims 2-16, 33, and 35 introduces one or more additional limitations that independently render it patentable. For example, Claim 33 features the limitation "wherein said limited environment and said general environment are both implemented on the same machine," which, as explained above, is not disclosed, taught, or suggested by the cited art. Due to the fundamental differences already identified, to expedite the positive resolution of this case, a separate discussion of the limitations of Claims 2-16 and 35 is not included at this time. The Applicant reserves the right to further point out the differences between the cited art and the novel features recited in the dependent claims.

Claims 17-32 and New Claims 34 and 36 include limitations similar to Claims 1-16, 33, and 35, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 17-32, 34, and 36 are patentable over *Schnurer* for at least the reasons given above with respect to Claims 1-17, 33, and 35.

Claim Rejections – 35 U.S.C. § 103(a)

The Office Action rejects Claims 3, 5-6, 9, 11, 19, 21-22, 25, and 27 under 35 U.S.C. § 103(a) as being unpatentable over *Schnurer*. This rejection is respectfully traversed.

As explained above, Claims 3, 5-6, 9, 11, 19, 21-22, 25, and 27 each feature subject matter that is not disclosed, taught, or suggested by *Schnurer*. Assuming, *arguendo*, that the assertions of the Office Action were well known to those skilled in the art at the time of the invention, and further assuming, *arguendo*, that it would have been obvious to combine the approach of *Schnurer* with the Office Action's assertions, the resulting combination would still not result in the approach featured in the pending claims in view of the fundamental distinctions, discussed above, between the approach of *Schnurer* and the pending claims.

Consequently, it is respectfully submitted that Claims 3, 5-6, 9, 11, 19, 21-22, 25, and 27 are non-obvious over *Schnurer*, and that each of the pending claims is in condition for allowance.

Conclusion

For the reasons given above, Applicant submits that the pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all pending claims is respectfully solicited.

The Examiner is invited to telephone the undersigned at (408) 414-1080 to discuss any issue that may advance prosecution.

No fee is believed to be due specifically in connection with this Reply. The Commissioner is authorized to charge any fee that may be due in connection with this Reply to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

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Christopher J. Brokaw
Reg. No. 45,620

1600 Willow Street
San Jose, California 95125-5106
Telephone No.: (408) 414-1080
Facsimile No.: (408) 414-1076